

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs. 1, 2, and 3. These sheets, which include Figs. 1, 2, and 3 replace the original sheets including Figs. 1, 2, and 3.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

**REMARKS/ARGUMENTS**

Claims 1-20 are pending and stand rejected. Figures 1, 2, and 3 are amended to overcome the objections raised by the Examiner. Likewise, the specification and the claims have been amended to overcome the objections noted by the Examiner.

Claims 1, 8-10, and 17 stand rejected under 35 USC 103(a) as being unpatentable over Applicant Admitted Prior Art in view of U.S. Patent No. 6,473,467 to Wallace et. al (hereinafter "Wallace"). Claims 18-20 stand rejected under 35 USC 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Wallace and further in view of U.S. Patent No. 4,891,823 to Cole (hereinafter "Cole"). In view of the foregoing amendment and following remarks, Applicants respectfully traverse these rejections for at least the following reasons.

As pointed out correctly by the Examiner, Applicant Admitted Prior Art does not disclose forming the first vector quantity  $\mathbf{xopt}_1$  and the second vector quantity  $\mathbf{xopt}_2$ . Likewise, there is no disclosure in Cole of forming the first vector quantity  $\mathbf{xopt}_1$  and the second vector quantity  $\mathbf{xopt}_2$ . Applicants submit that there is also no disclosure, in Wallace of "forming a first vector quantity  $\mathbf{xopt}_1$  associated with a first one of the transmit antennas and having elements defined by a column  $\mathbf{h}_1$  of matrix  $\mathbf{H}$  associated with the first antenna, the remaining columns  $\mathbf{H}_{n \neq 1}$  of matrix  $\mathbf{H}$ , and a matrix  $\mathbf{X}$  of possible symbols transmitted on the remaining ones of the transmit antennas...; and forming a second vector quantity  $\mathbf{xopt}_2$  associated with a second one of the transmit antennas and having elements defined by a column  $\mathbf{h}_2$  of matrix  $\mathbf{H}$  associated with the second antenna", as recited, in part, in claim 1.

Wallace appears to disclose determining channel state information (CSI) to be used by a communications system to precondition transmissions between transmitter and receiver units. Pilot symbols are generated and transmitted on a subset of disjoint subchannels assigned to transmit antennas of a transmitter unit. There is no disclosure in Wallace of the first and second vector quantities associated respectively with the first and second antennas and with elements defined in the manner described in claim 1. If the Examiner believes otherwise, the


Examiner is requested to point out with specificity where such purported vectors are shown or described in Wallace.

Accordingly, Wallace, whether taken alone, or in combination with Applicant Admitted Prior Art and Cole, fails to disclose "forming a first vector quantity  $\mathbf{xopt}_1$  associated with a first one of the transmit antennas" and "forming a second vector quantity  $\mathbf{xopt}_2$  associated with a second one of the transmit antennas" as recited in claim 1. Claim 1 and its dependent claims 2-9 are thus allowable over Applicant Admitted Prior Art in view of Wallace and in further view of Cole. Claim 10 and its dependent claims 11-20 are also allowable for at least the same reasons as claim 1.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 752-2424.

Respectfully submitted,

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